



Published in final edited form as:

Fam Process. 2018 June ; 57(2): 432–447. doi:10.1111/famp.12283.

Parental perceived control and social support: Linkages to change in parenting behaviors during early adolescence

Melissa A. Lippold¹, Terese Glatz², Gregory M Fosco³, and Mark E. Feinberg³

¹The University of North Carolina at Chapel Hill, Chapel Hill, NC

²Örebro University, Örebro, Sweden

³The Pennsylvania State University, University Park, PA

Abstract

Prior studies have found that parents' perceptions of control over their lives and their social support may both be important for parenting behaviors. Yet, few studies have examined their unique and interacting influence on parenting behaviors during early adolescence. This longitudinal study of rural parents in two-parent families ($N = 636$) investigated a) whether perceived control and social support when their youth were in 6th grade were independently or interactively associated with changes in parenting behaviors (discipline, standard setting) and parent-child warmth and hostility six months later and b) if these linkages differed by parent gender. We also investigated the interactive links between perceived control, social support, and parenting. Specifically, we tested if parents' perceived control moderated the linkages between social support and parenting and if these linkages differed by parent gender. Greater perceived control predicted more increases in parents' consistent discipline and standard setting, whereas greater social support predicted increases in parent-child warmth and decreases in parent-child hostility. Parental perceived control moderated the effect of social support on parental warmth: For mothers only, social support was significantly linked to parent-child warmth only when mothers had low (but not high) perceived self-control. The discussion focuses on reasons why perceived control and social support may have associations with different aspects of parenting and why these might differ for mothers and fathers.

Keywords

perceived control; social support; parenting behaviors; early adolescence

Although it is rewarding, parenting is also among the most demanding social roles in adulthood. This might be especially true for parents of adolescents as parents often endorse disproportionate negative stereotypes of adolescence as a period of storm and stress (e.g.,

Corresponding Author: Melissa Lippold, Ph.D., School of Social Work, The University of North Carolina at Chapel Hill, Tate-Turner-Kuralt Bldg., 325 S. Pittsboro St CB # 3550, Chapel Hill, NC 27599, Phone: 919-862-6405, mlippold@unc.edu.

Additional Authors: Terese Glatz, Ph.D., School of Law, Psychology and Social Work, Örebro University, Fakultetsgatan 1, 70182 Örebro, Phone: +4619301205, terese.glatz@oru.se; Gregory M. Fosco, Ph.D., Department of Human Development and Family Studies, The Pennsylvania State University, 226 Health and Human Development East University Park PA 16802, Phone: 814-865-5622, gmf19@psu.edu; Mark E. Feinberg, Ph.D., Prevention Research Center, The Pennsylvania State University, 14 Biobehavioral Health Building University Park PA 16802, Phone: 814-865-7375, mef11@psu.edu

Buchanan & Hughes, 2009) and often report being worried about this developmental period (Silverberg & Steinberg, 1990). Indeed, youth experience many changes as they transition into adolescence, including increased independence and autonomy and increased reliance on peers. Such changes might be stressful for parents, who may find that they need to adapt to a new parenting role (Collins & Laursen, 2006). Because certain parenting behaviors, such as consistent discipline and parental warmth are linked to positive adolescent adjustment in prior studies (Steinberg & Silk, 2002), it is important to know what factors increase such parenting behaviors at their children's transition to adolescence.

Two factors suggested by Belsky (1984) might be important influences on parenting behaviors: Parents' personal psychological resources and contextual sources of support. Parents may be influenced by their own internal, psychological resources, such as their perceptions of their ability to exert control and influence their own lives and behaviors (Bandura, 1997, 2002; Skinner, 1996). Beyond self-perceptions, parents also may benefit from external support, such as having people in their lives that can provide advice, guidance, and aid in their parenting role (Dominguez & Watkins, 2003). Building on prior work documenting these psychological and external resources as determinants of parenting, the current study seeks to address important limitations to the literature. First, the existing literature has generally focused on each of these factors in isolation; it is unknown whether these factors offer unique, additive benefits to parenting. Second, little is known about how internal and external factors may interact to affect parenting, and if one of these resources may compensate for another. Lastly, prior work has largely focused on parenting during early childhood (e.g., Jackson, 2000; Raikes & Thomson, 2005) and little is known about these determinants of parenting during the transition to adolescence. Thus, in this study, we examine these two potential resources: Parents' perceived control—an internal resource—and their social support—an external resource—as predictors of parenting among a sample of rural mothers and fathers of children at the transition to adolescence.

Parents' Perceived Control as an Internal Resource

As an internal resource, parents' perceptions of the level of control over their lives might be important for their parenting (Bandura, 1997; Skinner, 1996). Different terms and concepts have been used to refer to a person's perceived control, such as efficacy, locus of control, and mastery (Bandura, 1997; Skinner, 1996). In general, these concepts can be divided into two groups: Proximal and distal control beliefs (Murray, Rodgers, & Fraser, 2012). Proximal control beliefs describe a person's perceived level of control over exercising a specific behavior, such as a specific parenting behavior, whereas distal control beliefs tap into beliefs about control over life in general (Murray et al., 2012). Parent's distal control beliefs, such as their global sense of control, may include their perceptions about many aspects of their lives, not just parenting, such as perceptions about control over finances, work, and other relationships.

Most research on parental control beliefs and parenting has been conducted using measures of proximal control beliefs, such as those related to parenting. Proximal beliefs have been linked to certain parenting behaviors, such as parental warmth and positive discipline practices (e.g., Glatz & Buchanan, 2015a; for a review, see Jones & Prinz, 2005). Yet, distal

control beliefs may also be important for parenting behaviors. In two studies, higher distal control beliefs were linked to less perceived stress among parents of young children (Jackson, 2000; Raikes & Thomson, 2005), which might encourage closer parent child relationships and more consistent discipline. More specifically, a sense of greater control over their lives may give parents confidence that their behaviors may impact their children's well-being, to feel optimistic about their role as a parent, and may motivate them to parent in ways that have a positive impact on their children. Additionally, parents who perceive they have greater control over their lives may be more likely to exert effort in their parenting role, even when they encounter obstacles and barriers (Bandura, 1997). Hence, although understudied, at least two studies have offered evidence that parents' distal control beliefs are just as important as proximal control beliefs.

This study builds on work conducted on young children (ages 2 months to 4 years), to examine the importance of distal control beliefs for parenting during early adolescence. The adolescent transition is commonly marked by increases in parental stress (Putnick et al., 2010) and changing needs as adolescents seek greater autonomy (Collins & Laursen, 2006). Higher levels of parents' distal control beliefs might make the transition to adolescence less stressful for parents with positive implications for how they parent their children. Because distal measures of control often have been overlooked in parenting research, and the existing studies have focused on parents' emotional reactions as outcomes, it is unknown if such measures are linked not only to parental experience such as parental stress, but also to parenting behaviors. However, despite a lack of empirical research on distal control beliefs among parents with adolescent children, it is likely that parents who feel more in control in general are more engaged in positive discipline practices and have a warmer relationship with their children.

Parents' Perceived Social Support as an External Resource

In addition to the impact of control beliefs, parents might also draw on social support as an external resource to navigate their child's transition into adolescence. Social support is often conceptualized as a part of a broader construct of social capital and describes the help one gets from close relationships to "get by" or cope with the demands of everyday life and other stresses (Dominguez & Watkins, 2003). Social support often is provided by individuals with whom one has strong ties—such as kin, romantic partners, neighbors, and intimate friends—who can offer emotional, and at times, instrumental help (e.g., child care, transportation, Dominguez & Watkins, 2003). Hence, when parents experience parenting-specific issues, they might seek support and advice from people close to them, which might aid them in their parenting role.

Social support may reduce parents' stress and improve parents' psychological health, with positive implications for their parenting behaviors. Parents who perceive they have a caring and available social network have better psychological health (Taylor, Conger, Robins, & Wisaman, 2015). Parents' social support has been shown to reduce depression and stress (Östberg & Hagekull, 2000), especially among parents of high-risk youth (e.g., those with special needs, in poverty). Additionally, social support may also help parents regulate their emotional response to their children (Marroquín, 2011), resulting in more consistent

parenting behaviors and more parental warmth. Indeed, parents with higher social support have been shown to be more nurturing and consistent in their parenting and less likely to use harsh parenting behaviors across a range of child ages (e.g., Byrnes & Miller, 2012; Ceballo & McLoyd, 2002; Marroquín, 2011; McConnell, Breitreuz, & Savage, 2011).

Social support systems may change during adolescence, as there may be fewer organized support systems for parents of adolescents. There is some evidence that levels of parents' social support—both instrumental and emotional—and the strength of their social networks may decrease as children become older (Kalmijn, 2012). Despite decreased levels of social support, parents of adolescents may still derive important benefits from social support. Social support may reduce parents' stress associated with the adolescent transition, thus enabling parents to use more effective parenting strategies (Östberg & Hagekull, 2000).

Parents' Perceived Control and Social Support

Most studies on parenting have focused on internal and external resources separately, and very few studies have looked at them simultaneously. In two cross-sectional studies, Jackson (2000) and Raikes & Thomson (2005) examined parents' levels of perceived control and social support as simultaneous predictors of parenting. In both studies, the unique influence of parents' perceived control (i.e., above and beyond the effect of social support) for parents' level of stress was significant, but the studies differed concerning the importance of social support. Using a measure capturing both parenting-specific and general social support, Raikes and Thomson (2005) showed no significant association between social support and parenting stress when controlling for perceived control. Jackson (2000) found a significant link between support from friends and parenting stress, but not between social support from family and parenting stress. Hence, some contrasting results have been found concerning the association between social support and parenting stress, while the impact of perceived control seem to be more robust. These studies are cross-sectional and little is known about these processes over time.

In addition, little is known about how perceived control and social support may interact to predict parenting. Although both internal and external resources are theoretically important determinants of parenting (e.g., Belsky, 1984), and despite being highly correlated (Green & Rodgers, 2001; Meunier & Roskam, 2009), no study, to our knowledge, has examined the potential impact of the combination of these factors for parenting. Yet, according to the process-person-context model (Bronfenbrenner, 1986), the effects of external factors, such as social support, on parenting outcomes may vary based on person characteristics, such as control beliefs. For example, perceived control may moderate the effect of social support on parenting behavior (Bronfenbrenner, 1986): If a parent perceives a lack of control over their environment, then external resources, such as social support, may become particularly important for sustaining warm parent-child interactions and effective discipline practices. Thus, social support may compensate for internal resources and be an especially strong predictor of parenting behaviors when parents do not feel in control over their lives.

Parents' Perceived Control Beliefs and Social Support among Mothers and Fathers

In addition to a lack of studies examining the impact of perceived control and social support for parenting among parents of adolescents, few studies have included both mothers and fathers, making it difficult to understand how perceived control and social support are linked to parenting for both genders. Findings are mixed as to whether perceptions of control are related to parenting behaviors for fathers, with some studies finding significant linkages for fathers (Egbert, Prinzie, Deković, de Haan, & van den Akker, 2015) and others finding no significant associations among fathers (Glatz & Buchanan, 2015a). Similar mixed findings are also present regarding social support, with at least one study finding linkages between social support and parenting for mothers but not for fathers (Taylor et al., 2015). Other studies on fathers have found that social support from partners may be important for fathers, with higher amounts of partner support being linked to more feelings of parental competence (Bogenschneider et al., 1997), as well as being an important buffer against the effects of stress on parenting (Degarmo, Patras, & Eap, 2008; Fagan, Bernd, & Whiteman, 2007). In this study we examine parent gender differences in the unique and interactive linkages between parents' perceived control, social support, and parenting.

Parenting in a Rural Context

An additional important factor concerning how parents' perceived control and social support affect parenting is the community context in which these processes unfold (e.g., Bandura, 2002). Although much of the U.S. population resides in rural communities (Beeson & Strange, 2003), little is known about how internal and external resources affect parenting in rural contexts. Some studies suggest that rural parents may face unique stressors, given the economic declines, poverty rates and isolation from services characteristic of rural communities (Simmons, Braun, Wright, & Miller, 2007). Higher rates of poverty and economic strain have been linked to lower levels of parenting control beliefs (Boardman & Robert, 2000), and stress from these experiences could negatively affect parenting behavior (Conger, Ge, Elder, Lorenz, & Simons, 1994), which may place rural families at particular risk of poor parenting. However, there is also some evidence that families in rural communities may have more extensive social networks than families residing in other types of communities, and that these social networks may be particularly important for the health and well-being of rural families (Hofferth & Iceland, 1998; Simmons et al., 2007; Van Dyck, Cardon, Deforche & De Bourdeaudhuij, 2011). Parents in rural communities may be more likely to offer and receive advice and support from others in their communities—especially given the lack of professional services—and this support may be particularly important for their well-being and parenting behaviors. However, given a lack of empirical study, little is known how the rural context may specifically affect these processes.

The Present Study

The aim of the present study was to fill some of the gaps in the literature by examining the longitudinal associations between parents' internal and external resources and their parenting behaviors among a sample of rural parents of children in early adolescence.

Specifically, we investigated the linkages between parents' perceived control, social support, and changes in their parenting behaviors.

First, we tested whether parents' level of perceived control and social support were both important for their parenting behaviors, and if they each predicted unique variance in parenting behaviors. We investigated two types of parenting behaviors: Behavioral control (e.g., discipline, standard setting) as well as the emotional tone of the parent-child interactions (e.g., parental warmth and hostility towards their children), given that both of these domains have been linked to youth adjustment (Steinberg & Silk, 2002). We ran separate models for parent-child warmth and hostility given other studies that have suggested they have differential linkages to youth outcomes (Dallaire et al., 2006). Our first hypothesis was that higher levels of perceived control and social support would predict more positive parenting behaviors (i.e., more effective discipline practices and warmer parent-child relationships). We also examined differences in these relations among mothers and fathers. Our second hypothesis was that the associations between perceived control and social support with parenting behaviors would be stronger among mothers than fathers.

Next, we investigated whether internal and external resources interact to affect parenting behaviors. Specifically, we tested whether parenting behaviors are more strongly linked to social support when parents feel less control over their lives (e.g., moderation). Our third hypothesis was that social support would have a stronger linkage to changes in parenting behaviors among parents who had lower perceived control than among parents who had higher perceived control. We also tested if these associations were moderated by parent gender. However, given mixed findings in prior literature our examination of gender differences was exploratory and we did not posit specific hypotheses.

Method

Study Design and Participants

In this study we used data obtained from a subset ($n = 636$) of children in early adolescence and their parents who participated in an in-home data collection as part of the Promoting School-Community-University Partnerships to Enhance Resilience project (PROSPER). PROSPER is a large scale effectiveness trial of preventive interventions aimed at reducing substance use initiation among rural adolescents in 28 rural communities and small towns in Iowa and Pennsylvania (see Spoth, Greenberg, Bierman, & Redmond, 2004). Students from two successive cohorts of sixth graders completed in-school questionnaires. On average, 88% of all eligible students completed in-school assessments at each wave. In addition, families of students in the second cohort of sixth graders were randomly selected and recruited for participation in an additional in-home assessment that included a family interview, videotaping of a family interaction, and written questionnaires completed independently by the youth, mother, and, if present, father. Of the 2267 families recruited for in-home family assessments 977 (43%) completed the in-home assessments. Retention was high, with 83% of families at Wave 1 also participating at Wave 2.

To test for selection bias, youth in the sample assessed with in-home visits were compared to youth in the total sample assessed at school (e.g., youth in the in-school sample who did and

did not participate in the in-home assessments; $N = 4,400$) on a set of demographic and behavioral outcomes. Youth in the in-home sample were not different from the total in-school population at Wave 1 on receipt of free or reduced lunch (33.6% vs. 33.0% respectively), living with two biological parents (59.3% vs. 62.5%), race (88.6% White vs. 86.5% White), gender (49.5% vs. 46.8% male) or intervention condition (50.4% vs. 52.1% treatment condition). However, youth who received in-home assessments were less likely to engage in delinquent behavior than youth in the in-school sample ($M = .58$, $SE = .06$ vs. $M = .82$, $SE = .04$): $F(1, 27) = 18.32$, $p < .01$.

Given the research questions in this study, the sample was limited to two-parent families (e.g., those that indicated they were in a married or married-like relationship ($n=636$; 65% of the full sample) who provided data for both mothers and fathers. The demographics of the sample at Wave 1 are as follows. Youth (52% female) resided in Iowa (60%) and Pennsylvania (40%), and were, on average 11.3 years ($SD = .49$) at study entry in sixth grade. The mean age of mothers was 38.86 ($SD = 5.62$) and of fathers was 41.18 ($SD = 6.72$). Average household income was \$59,000 (in 2003) and 69% of parents had some post-secondary education. The average number of youth per home was three ($SD = 1.56$). Seventy-two percent were living with both biological parents. Most youth were Caucasian (90%); 5% Hispanic, 2% African American, 2% were Native American/American Indian, 1% Asian and 2% were of another ethnicity.

Measures

All measures were from the Iowa Youth and Families Project (Conger, 1989; McMahon & Metzler, 1998; Spoth, Redmond, & Shin, 1998) and adapted from the Pearlin Perceived Control and Mastery scale (Lachman & Weaver, 1998; Pearlin & Schooler, 1978). These measures have been used extensively in other studies (Fosco et al, 2014; Redmond et al., 2009; Spoth et al, 1998) and have shown expected associations with other variables, including youth outcomes, suggesting they have high construct validity. This study uses data reported by parents and youth on perceived paternal and maternal control and social support from Wave 1 (when youth were in the Fall of Grade 6) as well as measures of parenting at Waves 1 and 2 (Fall and Spring, Grade 6). Scales of our parenting variables were created using the average of youth and parent reports.

Perceived Control—The mean of 7 items was used to assess parents' perceived control over their environment. An example item is "What happens to me in the future mostly depends on me" (1 = *agree* to 5 = *disagree*). Items were coded so that higher scores indicate greater perceived control ($\alpha = .79$ mothers, $\alpha = .75$ fathers).

Social Support—We used the mean of 4 items assessing if parents' have individuals to turn to for support and guidance around their children. An example item is "I feel that I do not have anyone I can talk to about my children" (1 = *agree* to 5 = *disagree*). Higher scores indicate more social support ($\alpha = .85$ mothers, $\alpha = .84$ fathers).

Consistent discipline—A three-item scale was created to measure consistent discipline. Examples of items include "Once a discipline has been decided, how often can he or she get

out of it?” and “How often do you discipline this youth for something at one time and then at other times not discipline him or her for the same thing?” (1 = *always* to 5 = *never*). Higher scores indicate more consistent discipline (parent-report $\alpha = .70$ mothers, $.66$ fathers; youth-report $\alpha = .56$ mothers, $.61$ fathers).

Standard setting—This scale consisted of the mean of 4 items assessing whether parents give reasons for their decision-making and include youth in the decision-making process. An example item is “How often do you give reasons to this child for your decisions” (1 = *always* to 7 = *never*). Items were coded so that higher scores indicate greater standard setting (parent-report $\alpha = .70$ mothers, $.70$ fathers; youth report $\alpha = .70$ mothers, $.80$ fathers).

Parent-Child Warmth—Youth and parent perceptions of parental warmth towards their children were measured using three items on a 1–7 scale, with higher scores indicating more warmth. An example item asked how often in the past month the mother “Let this youth know you really care about him/her” (1 = *never* to 7 = *always*). Youth were asked similar items about interactions with their parents. Higher scores indicate more warmth (parent-report $\alpha = .87$ mothers, $.88$ fathers; youth-report $\alpha = .79$ mothers, $.88$ fathers).

Parent-Child Hostility—Youth and parent perceptions of parental hostility towards their children were measured using three items on a 1–7 Likert Scale, which were coded such that higher scores indicated more hostility. An example item is “When this youth does something wrong, how often do you lose your temper and yell at him or her” (1=*never* to 7= *always* parent-report $\alpha = .83$ mothers, $.83$ fathers, youth-report $\alpha = .77$ mothers, $.82$ fathers).

Covariates—Three demographic control variables were included in the models as covariates, given their associations with parenting in prior literature (Steinberg & Silk, 2002): Parent education (years of schooling, ranged from 0–20), dual biological marital status (1=*living with both biological parents*, 0= *not living with both biological parents*), and youth gender (1=*male*, 0=*female*). Given the data for this study are from an intervention study, all models also control for intervention condition (1= *intervention group*, 0= *control group*). We also include Wave 1 levels of the specific parenting behavior being examined as a covariate.

Plan of Analysis

Multi-level models were used to account for nesting of the data (parent within family) (Singer & Willett, 2003). Perceived control and social support predicted changes in parenting between Wave 1 and 2. First, perceived control and social support were entered simultaneously into the multi-level model at Level 1 to assess their unique association with parenting. Second, we tested for moderation by parent gender by adding interaction terms (social support x gender; perceived control x gender) into the multilevel models. Third, we tested whether perceived control moderated the linkages between social support and parenting behaviors by adding a social support x perceived control term to our model. Lastly, we tested whether the interaction between perceived control and social support in predicting parenting behaviors differed for by parent gender by adding a three-way

interaction term (social support x perceived control x parent gender). We included Wave 1 levels of parenting, demographics, and intervention condition as covariates.

Missing data was handled using Proc mixed in SAS, which allowed us to maximize our available data. Our sample was limited to two-parent families: all of the mothers and fathers in our sample provided data on social support, perceived control, and parenting variables at Wave 1. However, there was missing data on Wave 2 parenting variables for either mothers or fathers for 18.7% of the study population. To investigate potential differential attrition, a series of t-tests were run to examine differences on parenting variables between those remained versus dropped out of the study. Mothers who remained in the study did not differ from those who dropped out regarding consistent discipline, standard setting, or their warmth or hostility towards their children. Fathers who remained in the study had higher levels of consistent discipline ($M = 5.31$, $SE = .72$) than those who dropped out ($M = 5.12$, $SE = .87$; $t = 2.39$, $p < .05$). However, fathers did not differ on levels of standard setting, parental warmth, or parental hostility. Given this sole difference, we concluded that there is little risk that attrition influenced our results.

Results

Descriptive Statistics

Perceived control and social support at Wave 1 were significantly correlated with all of the parenting outcomes at Wave 2 (Table 1).

The Unique Linkages Between Perceived Control, Social Support, and Parenting

Our first hypothesis—that perceived control and social support would both predict unique variance in changes in parenting behaviors—received partial support (See Table 2; Model 1). Greater perceived control at Wave 1 was associated with increases in consistent discipline ($B = .18$, $p < .001$) as well as standard setting ($B = .10$, $p < .05$) at Wave 2. However, perceived control was not a significant predictor of changes in parents' warmth or hostility. Social support was linked to changes in the emotional aspects of parenting: Greater social support at Wave 1 predicted increases in parent-child warmth ($B = .07$, $p < .05$) and decreases in parent-child hostility ($B = -.07$, $p < .05$). Greater social support was also associated with increases in parental standard setting ($B = .11$, $p < .05$).

Our second hypothesis, that the unique associations between perceived control and social support with parenting would be stronger for mothers than fathers was not supported (Table 2, Model 2). Only, one marginal moderation effect by parent gender was found for the associations between social support and standard setting ($B = .16$, $p = .057$).

Perceived Control as a Moderator of the Link between Social Support and Parenting

Next, we investigated whether perceived control moderated the associations between social support and parenting, by adding a social support x perceived control term to our model. The interaction between social support and perceived control was not significant in our main effect models (not shown). Thus our hypothesis that the linkages between social support and parenting would be stronger among parents with low perceived control was not supported.

However, the moderating effect of parental perceived control on the linkages between social support and parent-child warmth differed by parent gender, as the three-way interaction term (social support x perceived control x parent gender) was significant for parent-child warmth ($B = .21$, $SE = .010$, $p < .05$). Follow-up tests of the simple slopes (± 1 SD) revealed that the linkages between social support and parental warmth differed by mothers' (but not fathers') perceptions of perceived control. For mothers, social support was related to greater parental warmth in the context of low perceived control ($B = .14$, $SE = .06$, $p < .05$), but not when mothers had high levels of perceived control ($B = .01$, $SE = .06$, $p > .05$). In contrast, for fathers, no association between social support and parent-child warmth was found in the context of either low ($B = .02$, $SE = .06$, $p > .05$) or high ($B = .12$, $SE = .07$, $p > .05$) perceived control.

Discussion

A child's transition to adolescence can be a challenging period for his or her parents—one that requires them to adapt to new roles and increasing youth autonomy (Steinberg & Silk, 2002). Given the importance of parents in promoting positive outcomes for youth, this two-wave longitudinal study aimed to further our understanding of the determinants of parenting during early adolescence by investigating how rural parents' level of internal (perceived control) and external (social support) resources when children are in the Fall of Grade 6 are linked to changes in their parenting behaviors six months later. Theoretically, this study is based on ideas of possible determinants of parenting (Belsky, 1984), and built on prior work conducted with parents of young children (Jackson, 2000; Raikes & Thomson, 2005). We also tested the interaction between perceived control and social support to assess if perceived control moderated the effects of social support on parenting behaviors. Our results suggest that perceived control and social support are both important for parenting behaviors during early adolescence—but they appear to have unique implications for particular aspects of parenting and may have different linkages for mothers and fathers.

Perceived Control and Parenting Behaviors

Our study suggests that distal control beliefs—those over life in general—have important implications for control-related parenting behaviors, such as consistent discipline and standard setting (Halgunseth, Perkins, Lippold, & Nix, 2013), even when accounting for the impact of social support. This result suggests that a greater sense of control over their lives may give parents the motivation to consistently respond to children's behaviors and to set and enforce clear expectations, even in situations that may be challenging (Bandura, 1997, 2002). At the same time, greater perceived control may also help give parents the confidence and motivation needed to engage children in their rule-setting and decision making, and to help develop inductive reasoning skills in their adolescent, as indicated by the link between perceived control and our measure of standard setting. The transition to adolescence is often accompanied by a reorganization of the parent-child relationship where parents must balance the early adolescents' needs for structure with a growing need for autonomy (Steinberg & Silk, 2002). Parents who feel their behaviors are likely to have an effect on their environment may be better equipped to maintain consistent responses to behavior and to encourage youth autonomy by increasing youth involvement in decision making.

After accounting for social support, the level of parents' distal control beliefs was not significantly associated with changes in parent-child warmth or hostility. This finding indicates that parents' sense of control over their environment may more closely translate into a sense of and actual control over youth behavior (i.e., disciplinary practices) than the emotional tone of parent-child interactions. This finding was somewhat surprising, given the link in prior research between parents' perceived control and reductions in their stress and depression among parents of young children (Jackson, 2000; Raikes & Thomson, 2005) and other studies on samples of rural families that have found reductions in parents' stress and depression to be linked to more positive parent-child relationships (Conger et al., 1994). However, it should be noted in our data significant bivariate correlations were found between perceived control and parental warmth and hostility. Thus, perceived control may be related to the level of parental warmth and hostility but not to changes in warmth and hostility over time. Overall, the present study extended prior work, mostly conducted on samples of young children's parents, to demonstrate that distal control beliefs have important implications not only for parental mental health, but for their disciplinary practices with early adolescents as well. More studies are needed across different developmental periods to understand how distal control beliefs may have differential effects on parenting across development.

Social Support and Parenting Behaviors

Social support influenced changes in the emotional quality of parent-child interactions. Parents who reported more social support had more warmth and less hostility towards their children. These findings support other work which found that social support may be linked to improved parent-child relationships (Ceballo & McLoyd, 2002; McConnell et al., 2011), but extends this work to suggest these effects can be observed even when accounting for parent's perceived control. Perhaps the process of accessing support from others reduces parental stress (Östberg & Hagekull, 2000) or increases a parent's own ability to self-regulate and manage their emotions, with positive implications for their parent-child relationships during early adolescence (Marroquín, 2011). Prior work has found that social support may be particularly important for the well-being of rural families given the lack of available services (Hofferth & Iceland, 1998; Simmons et al., 2007; Van Dyck, Cardon, Deforche & De Bourdeaudhuij, 2011); our work suggests social support may be critical for ensuring positive parent-child relationships as well.

Perceived Control Modifying The Influence of Social Support

We found evidence that perceived control moderated the linkages between social support and parenting—however this finding held for mothers only. In particular, when mothers had low perceptions of control over their environment, social support became an important predictor of change in parent-child warmth. This finding suggests that for mothers, external resources, such as social support may play a compensatory role for low internal resources, such as perceived control (Bronfenbrenner, 1986). Social interactions among women involve more emotional exchanges than those among men (Bell, 1991; Burda, Vaux, & Schill, 1984). Thus for mothers, social support may be more likely to affect their emotional state, compensate for low-efficacy beliefs, and subsequently result in warmer relationships with their children. It is important to note that these findings were not consistent across parents or

outcomes. Interactions between efficacy and social support were not found for fathers—nor for other types of mothers' parenting behaviors. There may be other types of relations between perceived control and social support, such as reciprocal effects or mediating processes that we did not test in this study. Future studies are needed to further understand how social support, perceived control, and parenting relate to one another and to youth outcomes over time.

Strengths, Limitations, and Future Research Directions

Our findings should be considered in light of the study strengths and limitations. First, our study was conducted on a sample of rural, primarily Caucasian parents and youth in two parent families. Rural youth are understudied, and understanding predictors of parenting among rural youth is a notable strength of the study. It is possible that the links between parenting, social support, and perceived control vary by neighborhood type (Ceballo & McLoyd, 2002). Future studies are needed to examine how these linkages may differ based on community factors such as economic opportunity, poverty, and service availability (Ceballo & McLoyd, 2002; Simmons, Braun, Wright, & Miller, 2007) and to test whether our results are generalizable to families in urban and suburban environments. Further, studies suggest racial differences in both the level of parental self-efficacy (Pinderhughes & Hurley, 2008; Glatz & Buchanan, 2015b) and its relations to parenting behaviors (Ardelt & Eccles, 2001). Lastly it is possible that our study findings may differ had we included single parent families. More studies are needed on more ethnically and demographically diverse samples to understand if the results can be generalized to other groups.

Second, the measures used in this study had both strengths and limitations. The scales were comprehensive and included a broad range of parenting behaviors, including the behaviors of mothers and father, and they captured the perspective of both parents and youth. Further, our study included measures of both social support and perceived control, allowing us to investigate their unique influence with parenting behaviors. Some of our measures, however, especially those of consistent discipline, had moderate reliability, which may have attenuated our findings and made it more difficult to detect study effects. Alpha may be low because our items conceptually tap into a broad range of parental actions related to discipline, representing a category of parenting behaviors, rather than a single latent trait. Additionally, our measure of social support did not specify the source of emotional support and guidance to parents nor did it assess instrumental support, such as aid with finances, transportation, or childcare, or co-parenting behaviors, which may have different relations to parenting. More studies are needed to differentiate social support from romantic partners from other sources, such as friends and family, and to understand how emotional support, instrumental support, and co-parenting work together to affect parenting behaviors. Studies that tap into possible gender differences in types and sources of social support and parenting may be particularly informative (Barbee et al., 1993). In addition, further studies may be needed to investigate possible differences by gender of the child. Lastly, in order to reduce the number of statistical tests, we used measures that combined both parent and youth reports of parenting, which like many studies are only moderately correlated. Future studies are needed to examine predictors of differences in parent and youth perceptions of parenting.

Third, the direction of effects between perceived control, social support, and parenting could not be fully determined by this study. Our models controlled for Wave 1 parenting behaviors, which increases our confidence that our findings do not merely reflect earlier parenting strategies. However, there may be reciprocal relationships among perceived control, social support, and parenting over time (McAuley & Blissmer, 2000), which were not captured in this study, and which may be a fruitful area for future research.

Conclusions and Implications

This study is part of a growing body of research that suggests both parents' internal and external resources are important determinants of their parenting behaviors. There are existing theoretical models concerning which parenting behaviors are linked to which child outcomes (e.g., Grusec & Davidov, 2010), but this study offers theoretical ideas about the link between certain determinants of parenting depending on the type of predictor and outcome. Specifically, perceived control was linked to changes in parents' discipline strategies, whereas control beliefs did not appear to be linked to changes in the emotional aspects of the parent-child relationship. Social support, however, was linked to changes in the relational aspects of parenting and also standard setting.

The results of this study also have important implications for interventions. Programs that target parents' perceived control over their environment might have positive implications for control-related parenting behaviors, which might be especially important for preventing conduct problems in children. Further, the findings suggest that interventions to improve parenting during early adolescence may need to include components on how to build and access social support networks. For both mothers and fathers, identifying and accessing social support networks may help them in their parenting role during the transition to adolescence. Parents' social support might have positive consequences for their emotional relationship with their children, especially for mothers who have low levels of perceived control over their lives. Hence, when developing programs for parents it seems important to take into account both the type of targeted parenting behavior, as well as the parents' gender.

Acknowledgments

Work on this paper was supported by research grant R03 DA038685 and R01 DA013709 from the National Institute on Drug Abuse. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institute on Drug Abuse or the National Institutes of Health. The authors declare that they have no conflict of interest.

References

- Ardelt M, Eccles J. Effects of mothers' parental efficacy beliefs and promotive parenting behaviors on inner-city youth. *Journal of Family Issues*. 2001; 22:944–972. DOI: 10.1177/019251301022008001
- Bandura, A. *Self-efficacy: The exercise of control*. New York, NY: Freeman; 1997.
- Bandura A. Social cognitive theory in cultural context. *Applied Psychology: An International Review*. 2002; 51:269–290. DOI: 10.1111/1464-0597.00092
- Barbee AP, Cunningham MR, Winstead BA, Derlega VJ, Gulley MR, Yankeelov PA, Druen PG. Effects of gender-role expectations on the social support process. *Journal of Social Issues*. 1993; 49:175–190. DOI: 10.1111/j.1540-4560.1993.tb01175.x
- Beeson, E., Strange, M. *Why rural matters: The continuing need for every state to take action on rural education*. Washington, DC: Rural School and Community Trust; 2003.

- Bell RA. Gender, friendship, network density, and loneliness. *Journal of Social Behavior and Personality*. 1991; 6(1):45–56. Retrieved from <http://search.proquest.com/docview/1292260117?accountid=14244>.
- Belsky J. The determinants of parenting: A process model. *Child Development*. 1984; 55:83–96. DOI: 10.2307/1129836 [PubMed: 6705636]
- Boardman JD, Robert SA. Neighborhood socioeconomic status and perceptions of self-efficacy. *Sociological Perspectives*. 2000; 43(1):117–136.
- Bronfenbrenner U. Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology*. 1986; 22(6):723. doi: 10.1037/0012-1649.22.6.723
- Bogenschneider K, Small SA, Tsay JC. Child, parent, and contextual influences on perceived parenting competence among parents of adolescents. *Journal of Marriage and Family*. 1997; 59(2):345–362. DOI: 10.2307/353475
- Buchanan CM, Hughes JL. Construction of social reality during early adolescence: Can expecting storm and stress increase real of perceived storm and stress? *Journal of Research on Adolescence*. 2009; 19:261–285. DOI: 10.1111/j.1532-7795.2009.00596.x
- Burda PC, Vaux A, Schill T. Social support resources: Variation across sex and sex role. *Personality and Social Psychology Bulletin*. 1984; :119–126. DOI: 10.1177/0146167284101014
- Byrnes HF, Miller BA. The relationship between neighborhood characteristics and effective parenting behaviors: The role of social support. *Journal of Family Issues*. 2012; 33:1658–1687. DOI: 10.1177/0192513X12437693 [PubMed: 23794774]
- Ceballo R, McLoyd VC. Social support and parenting in poor, dangerous neighborhoods. *Child Development*. 2002; 73:1310–1321. DOI: 10.1111/1467-8624.00473 [PubMed: 12146749]
- Collins, WA., Laursen, B. Parent-adolescent relationships. In: Noller, P., Feeney, JA., editors. *Close relationships: Functions, forms and processes*. Hove: Psychology Press/Taylor & Francis; 2006. p. 111-125.
- Conger, RD. Iowa Youth and Families Project, Wave A. Ames, IA: Institute for Social and Behavioral Research; 1989. Report prepared for Iowa State University
- Conger RD, Ge X, Elder GH, Lorenz FO, Simons RL. Economic stress, coercive family process, and developmental problems of adolescents. *Child Development*. 1994; 65:541–561. [PubMed: 8013239]
- Dallaire DH, Pineda AQ, Cole DA, Ciesla JA, Jacquez F, LaGrange B, Bruce AE. Relation of Positive and Negative Parenting to Children’s Depressive Symptoms. *Journal of Clinical Child and Adolescent Psychology*. The Official Journal for the Society of Clinical Child and Adolescent Psychology, American Psychological Association, Division 53. 2006; 35(2):313–322. http://doi.org/10.1207/s15374424jccp3502_15.
- DeGarmo DS, Patras J, Eap S. Social support for divorced fathers’ parenting: Testing a stress-buffering model*. *Family Relations*. 2008; 57(1):35–48. DOI: 10.1111/j.1741-3729.2007.00481.x [PubMed: 19177181]
- DeGarmo DS, Forgatch MS. A confidant support and problem solving model of divorced fathers’ parenting. *American Journal of Community Psychology*. 2012; 49(1–2):258–269. DOI: 10.1007/s10464-011-9437-y [PubMed: 21541814]
- Dominguez S, Watkins C. Creating networks for survival and mobility: Social capital among African-American and Latin-American low-income mothers. *Social Problems*. 2003; 50:111–135. DOI: 10.1525/sp.2003.50.1.111
- Egbert MR, Prinzie P, Dekovi M, de Haan AD, van den Akker AL. The prospective relationship between child personality and perceived parenting: Mediation by parental sense of competence. *Personality and Individual Differences*. 2015; 77:193–198. DOI: 10.1016/j.paid.2014.12.046
- Fagan J, Bernd E, Whiteman V. Adolescent fathers’ parenting stress, social support, and involvement with infants. *Journal of Research on Adolescence*. 2007; 17(1):1–22. DOI: 10.1111/j.1532-7795.2007.00510.x
- Feinberg ME. Coparenting and the transition to parenthood: A framework for prevention. *Clinical Child and Family Psychology Review*. 2002; 5(3):173–195. DOI: 10.1023/A:1019695015110 [PubMed: 12240706]

- Fosco GM, Grych JH. Capturing the family context of emotion regulation: A family systems model comparison approach. *Journal of Family Issues*. 2013; 34(4):557–578. DOI: 10.1177/0192513X12445889
- Glatz T, Buchanan CM. Over-time associations among parental self-efficacy, promotive parenting behaviors, and adolescents' externalizing behaviors. *Journal of Family Psychology*. 2015a; 29:427–437. DOI: 10.1037/fam0000076 [PubMed: 25844491]
- Glatz T, Buchanan CM. Change and predictors of change in parental self-efficacy from early to middle adolescence. *Developmental Psychology*. 2015b; 51:1367–1379. DOI: 10.1037/dev0000035 [PubMed: 26376286]
- Green BL, Rodgers A. Determinants of social support among low-income mothers: A longitudinal analysis. *American Journal of Community Psychology*. 2001; 29:419–442. DOI: 10.1023/A:1010371830131 [PubMed: 11469115]
- Grusec JE, Davidov M. Integrating different perspectives on socialization theory and research: A domain-specific approach. *Child Development*. 2010; 81:687–709. DOI: 10.1111/j.1467-8624.2010.01426.x [PubMed: 20573097]
- Halgunseith LC, Perkins DF, Lippold MA, Nix RL. Delinquent-oriented attitudes mediate the relation between parental inconsistent discipline and early adolescent behavior. *Journal of Family Psychology*. 2013; 27(2):293.doi: 10.1037/a0031962 [PubMed: 23544924]
- Hofferth SL, Iceland J. Social capital in rural and urban communities. *Rural Sociology*. 1998; 63(4): 574–598.
- Jackson AP. Maternal self-efficacy and children's influence on stress and parenting among single black mothers in poverty. *Journal of Family Issues*. 2000; 21:3–16. DOI: 10.1177/019251300021001001
- Jones TL, Prinz RJ. Potential roles of parental self-efficacy in parent and child adjustment: A review. *Clinical Psychological Review*. 2005; 25:341–363. DOI: 10.1016/j.cpr.2004.12.004
- Kalmijn M. Longitudinal analyses of the effects of age, marriage, and parenthood on social contacts and support. *Advances in Life Course Research*. 2012; 17(4):177–190. DOI: 10.1016/j.alcr.2012.08.002
- Lachman ME, Weaver SL. The sense of control as a moderator of social class differences in health and well-being. *Journal of Personality and Social Psychology*. 1998; 74(3):763.doi: 10.1037/0022-3514.74.3.763 [PubMed: 9523418]
- Marroquín B. Interpersonal emotion regulation as a mechanism of social support in depression. *Clinical Psychology Review*. 2011; 31(8):1276–1290. DOI: 10.1016/j.cpr.2011.09.005 [PubMed: 21983267]
- McAuley E, Blissmer B. Self-efficacy determinants and consequences of physical activity. *Exercise and Sport Sciences Reviews*. 2000; 28(2):85–88. Retrieved from http://journals.lww.com/acsm-essr/Abstract/2000/28020/Self_Efficacy_Determinants_and_Consequences_of.8.aspx. [PubMed: 10902091]
- McConnell D, Breikreuz R, Savage A. From financial hardship to child difficultness: Main and moderating effects of perceived social support. *Child Care, Health and Development*. 2011; 37:679–91. DOI: 10.1111/j.1365-2214.2010.01185.x
- McMahon, RJ., Metzler, CW. Selecting parenting measures for assessing family-based prevention interventions. In: Ashery, RS, Robertson, EB., Kumpfer, KL., editors. *Drug abuse prevention through family interventions*. Rockville, MD: National Institute on Drug Abuse; 1998. NIDA Research Monograph 177
- Meunier JC, Roskam I. Self-efficacy beliefs amongst parents of young children: Validation of a self-report measure. *Journal of Child and Family Studies*. 2009; 18:495–511. DOI: 10.1007/s10826-008-9252-8
- Murray TC, Rodgers WM, Fraser SN. Exploring the relationship between socioeconomic status, control beliefs and exercise behavior: A multiple mediator model. *Journal of Behavioral Medicine*. 2012; 35:63–73. DOI: 10.1007/s10865-011-9327-7 [PubMed: 21442246]
- Östberg M, Hagekull B. A structural modeling approach to the understanding of parenting stress. *Journal of Clinical Child Psychology*. 2000; 29:615–625. DOI: 10.1207/S15374424JCCP2904_13 [PubMed: 11126638]

- Pearlin LI, Schooler C. The structure of coping. *Journal of Health and Social Behavior*. 1978; :2–21. DOI: 10.2307/2136319
- Pinderhughes EE, Hurley S, Conduct Problems Prevention Research Group. Disentangling ethnic and contextual influences among parents raising youth in high-risk communities. *Applied Development Science*. 2008; 12(4):211–219. DOI: 10.1080/10888690802388151
- Putnick DL, Bornstein MH, Hendricks C, Painter KM, Suwalsky JTD, Collins WA. Stability, continuity, and similarity of parenting stress in European American mothers and fathers across their child’s transition to adolescence. *Parenting: Science and Practice*. 2010; 10:60–77. DOI: 10.1080/15295190903014638
- Raikes HA, Thomson RA. Efficacy and social support as predictors of parenting stress among families in poverty. *Infant Mental Health Journal*. 2005; 26:177–190. DOI: 10.1002/imhj.20044 [PubMed: 28682501]
- Silverberg SB, Steinberg L. Psychological well-being of parents with early adolescent children. *Developmental Psychology*. 1990; 36:658–666. DOI: 10.1037/0012-1649.26.4.658
- Simmons LA, Braun B, Wright DW, Miller SR. Human capital, social support, and economic well-being among rural, low-income mothers: A latent growth curve analysis. *Journal of Family and Economic Issues*. 2007; 28:635–652.
- Singer, JD., Willett, JB. *Applied longitudinal data analysis: Modeling change and event occurrence*. New York: Oxford University Press; 2003.
- Skinner EA. A guide to constructs of control. *Personality Processes and Individual Differences*. 1996; 71:549–570.
- Spoth R, Greenberg MT, Bierman K, Redmond C. PROSPER community-university partnership model for public education systems: Capacity-building for evidence-based, competence-building prevention. *Prevention Science*. 2004; 5:31–39. DOI: 10.1023/B:PREV.0000013979.52796.8b. [PubMed: 15058910]
- Spoth R, Redmond C, Shin C. Direct and indirect latent-variable parenting outcomes of two universal family-focused preventive interventions: Extending a public health-oriented research base. *Journal of Consulting and Clinical Psychology*. 1998; 66:385–399. DOI: 10.1037/0022-006X.66.2.385 [PubMed: 9583342]
- Steinberg, L., Silk, JS. Parenting adolescents. In: Bornstein, M., editor. *Handbook of parenting*. Vol. 1. Lawrence Erlbaum: Mahwah, N.J.; 2002. p. 103-133.
- Taylor ZE, Conger RD, Robins RW, Wisaman KF. Parenting behaviors and perceived social support: Longitudinal relations with the social competence of Mexican-origin children. *Journal of Latina/o Psychology*. 2015; doi: 10.1037/lat0000038
- Van Dyck D, Cardon G, Deforche B, De Bourdeaudhuij I. Urban–rural differences in physical activity in Belgian adults and the importance of psychosocial factors. *Journal of Urban Health*. 2011; 88(1):154–167. [PubMed: 21274644]

Table 1

Descriptive Statistics

	Mothers Mean SD	Fathers Mean SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. W1 Perceived control	3.98 (.61)	3.98 (.55)	1.00	.40**	.20***	.25**	.20**	.20**	.19**	.14**	-.19***	-.15***	.03	.06	-.02
2. W1 Social support	4.31 (.64)	4.08 (.61)	.42***	1.00	.22*	.23**	.23**	.26**	.27*	.24***	-.25***	-.22***	-.02	.09	-.06
3. W1 Consistent discipline	5.16 (.80)	5.28 (.76)	.22***	.18***	1.00	.46**	.24***	.27**	.15*	.18***	-.33***	-.21***	-.01	.05	.02
4. W2 Consistent discipline	5.36 (.79)	5.42 (.83)	.26***	.13***	.57***	1.00	.33***	.40***	.23***	.26***	-.34***	-.38***	-.04	.07	.01
5. W1 Standard setting	5.33 (.86)	5.19 (.92)	.21***	.14***	.22***	.25***	1.00	.51**	.53**	.42***	-.32***	-.31***	.02	.08*	.02
6. W2 Standard setting	5.36 (.92)	5.21 (1.06)	.20***	.14**	.25***	.39***	.50***	1.00	.47***	.65***	-.39***	-.44***	-.02	.11*	.06
7. W1 Parental Warmth	6.09 (.77)	5.65 (1.03)	.22***	.23**	.10**	.18**	.39**	.37*	1.00	.73***	-.41***	-.37***	-.11***	.19***	.01
8. W2 Parental Warmth	6.00 (.87)	5.56 (1.15)	.17**	.25***	.15***	.27**	.33**	.55**	.69***	1.00	-.38	-.47***	-.13***	.19***	.01
9. W1 Parental Hostility	2.58 (.84)	2.42 (.84)	-.32***	-.21**	-.47***	-.48***	-.29***	-.33***	-.30**	-.26***	1.00	-.74	.06	-.03*	.03
10. W2 Parental Hostility	2.32 (.79)	2.22 (.83)	-.27***	-.25***	-.39***	-.49***	-.31***	-.46***	-.34***	-.42***	.73***	1.00	.10*	.01	-.03
11. Youth Gender		48% female	.02	-.03	.02	-.01	.02	-.02	-.04	-.04	-.01	-.03	1.00	.09*	-.03
12. Dual Biological Marital Status		74% yes	.00	.01	.05	.10**	.05	.09*	.02	.06	-.05	-.03	.09*	1.00	.02
13. Condition		58% intervention	-.01	-.04	.06	.01	.04	.03	-.03	-.01	.02	-.04	-.03	.02	1.00

* $p < .05$,

** $p < .01$,

*** $p < .001$; $n = 636$

Table 2

Parents' Perceived Control and Social Support Predict Changes in Parenting Behavior

	Consistent Discipline	Standard Setting	Parental Warmth	Parental Hostility
	Est SE	Est SE	Est SE	Est SE
Model 1: Main Effect Models				
Fixed Effects				
Parents' perceived control	.18*** (.04)	.10* (.05)	-.05 (.03)	-.01 (.03)
Social support	.03 (.04)	.11* (.04)	.07* (.04)	-.07* (.03)
T1 parenting	.44*** (.02)	.47*** (.03)	.75*** (.02)	.69*** (.02)
Youth gender	-.07 (.05)	-.07* (.05)	-.09 (.05)	-.02 (.04)
Parent education	.02 (.01)	-.02 (.01)	-.01 (.01)	.01 (.01)
Dual bio parent	.02 (.05)	.10 (.08)	.06 (.06)	.06 (.04)
Condition	-.00 (.05)	.07 (.06)	-.01 (.05)	-.07* (.04)
Parent gender	.01 (.03)	-.07* (.03)	-.12* (.03)	.00 (.02)
Random effects				
Intercept	.19*** (.02)	.35*** (.04)	.22*** (.02)	.11*** (.01)
Residual	.26*** (.02)	.34*** (.02)	.26*** (.01)	.18*** (.01)
Model 2: Moderation Models by Parent Gender				
Fixed Effects				
Parents' perceived control	.18*** (.04)	.11* (.05)	-.04 (.03)	-.00 (.03)
Social support	.03 (.04)	.04 (.04)	.07* (.04)	-.07 (.03)
T1 parenting	.44*** (.02)	.47*** (.03)	.75*** (.03)	.69*** (.02)
Youth gender	-.07 (.05)	-.07* (.06)	-.09 (.05)	-.01 (.04)
Parent education	.02 (.01)	-.02 (.01)	-.00 (.01)	.01 (.01)
Dual bio parent	.02 (.05)	.10 (.07)	.07 (.06)	.06 (.04)
Condition	-.00 (.05)	.07 (.06)	-.01 (.05)	-.08* (.04)
Parent gender	.00 (.03)	-.08* (.04)	-.12* (.03)	-.00 (.02)
Perceived control x parent gender	.01 (.07)	-.02 (.08)	.07 (.07)	.03 (.06)
Social support x parent gender	.08 (.07)	.16* (.08)	-.02 (.07)	.00 (.06)

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

	Consistent Discipline	Standard Setting	Parental Warmth	Parental Hostility
	Est	SE	Est	SE
Intercept	.19***	(.02)	.34***	(.04)
Residual	.26***	(.02)	.22***	(.02)

Random effects

* $p < .05$,
 ** $p < .01$,
 *** $p < .001$